

mately 3400 cases in the study. Age (<65>), sex, urgency of admission and four co-morbidities were selected *a priori* for sub-group analyses; diabetes mellitus, acute MI, renal failure and dysrhythmia. Charges were converted to costs using the U.S. CMS cost-to-charge ratio of 0.3574. Economic data and the rates of clinical outcomes were drawn from the Center's patient-level data. Multi-factor regressions were conducted to determine the incremental effects of the four co-morbidities. Statistical significance and confidence intervals were calculated for each endpoint.

**RESULTS:** Average costs from admit to discharge were \$7,642 in total and pharmacy was \$525 (p value <.05). The geometric mean outcome rates were: death 0.8%, 2nd MI following PTCA 2.4%, revascularization procedures 3.2%, hemorrhage 8.7%, transfusion 3.4% and thrombocytopenia 1.3%. The sub-group with the highest costs and worst clinical outcomes were women, urgently admitted, > 65 years old who had renal failure, acute MI, or dysrhythmia, in descending impact.

**CONCLUSION:** The analyses provide a baseline to assess the future impact of a new medication on the formulary, as well as a basis to evaluate a new business agreement. The economic and clinical analyses will be repeated following the new medication's usage, and will then be evaluated by the Center's healthcare personnel in a group session.

## CANCER

CN1

### ECONOMIC EVALUATION OF CAPECITABINE-DOCETAXEL COMBINATION TREATMENT OF METASTATIC BREAST CANCER: A MICRO-SIMULATION STUDY

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**OBJECTIVES:** Capecitabine-docetaxel (CD) combination therapy significantly prolongs time to disease progression and overall survival, compared with docetaxel monotherapy (D). This study assessed the cost-effectiveness of CD versus D from perspective of a US health delivery organization.

**METHODS:** The model is based on analyses of a 2-armed, balanced, multicenter, randomized trial of CD compared with D for the treatment of advanced anthracycline-pretreated breast cancer (n = 511). Mean time to progression and mean survival were estimated using Kaplan-Meier methods. Data were collected on hospital resource use data, infusions, drug use, and number of consultations. Adjustments for QoL and cost per unit of resources were based on published data. The uncertainty in the cost-effectiveness was estimated using Monte Carlo simulation methods.

**RESULTS:** CD resulted in longer mean duration of treatment (129 days) than D (98 days). Patients lived an average of 80 days longer with CD and experienced 64 days longer progression-free survival. No significant differences were observed in medication use and consultations. Patients receiving CD had fewer treatment-related hospitalization days (4.8 days versus 5.5 days per patient). Because of the lower planned docetaxel dose in the combination arm (75 vs. 100mg/m<sup>2</sup>), the cumulative dose of docetaxel was 648mg in combination, compared with 847mg in monotherapy. 93% of the acquisition cost of capecitabine was offset by lower docetaxel costs for total added costs of \$1,341. Cost per quality-adjusted year of life (QALY) gained with CD was \$5,520. The 5th and 95th percentiles of cost-effectiveness were \$4,400 and \$11,600, respectively.

**CONCLUSIONS:** Combining capecitabine with docetaxel is cost-effective compared with docetaxel monotherapy in anthracycline-pretreated patients, by CD significantly prolonging time to progression and overall survival and lowering treatment-related hospitalization days. The results of the simulation analyses provide assurance that combination therapy is likely to be cost-effective when applied to non-trial settings.

CN2

### COST-UTILITY ANALYSIS OF LHRH AGONISTS IN THE TREATMENT OF METASTATIC PROSTATE CANCER

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**OBJECTIVES:** We performed a pharmacoeconomic evaluation of LHRH agonists (LAs) in treating metastatic prostate cancer compared to standard care, as identified in the literature and by clinical experts, including: estrogens (DES), orchiectomy, antiandrogens (AAs), and combinations therapy (LAs + AAs).

**METHODS:** A Markov model was constructed to perform a cost-utility analysis (CUA) over 5 years, from a Canadian provincial healthcare payer perspective. Treatment efficacy was determined by meta-analysis of published clinical data, and utilities were derived from the literature.

**RESULTS:** In the base case analysis, DES was least costly (\$588) but also least effective (0.52 QALYs). Orchiectomy (\$830 for 0.92 QALYs), with an incremental cost-utility ratio of \$615/QALY versus DES, dominated LAs (\$8,116 for 0.75 QALYs) and AAs (\$4,108 for 0.62 QALYs). Treatment with combination therapy was the most costly at \$18,029 and the most effective (1.04 QALYs), with an expected incremental ratio